

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10|815,320  
Source: IFW0  
Date Processed by STIC: 11|04|2005

***ENTERED***



IFWO

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/815,320

DATE: 11/04/2005

TIME: 13:27:14

Input Set : N:\Crf3\RULE60\10815320.raw  
 Output Set: N:\CRF4\11042005\J815320.raw

## SEQUENCE LISTING

## 3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Binz, Hans

6 Baussant, Thierry  
7 Haeuw, Jean-Francois  
8 Nguyen Ngoc, Thien10 (ii) TITLE OF INVENTION: Carrier Protein Having an Adjuvant  
11 Effect, Immunogenic Complex Containing It, Process for  
12 Their Preparation, Nucleotide Sequence and Vaccines

14 (iii) NUMBER OF SEQUENCES: 8

16 (iv) CORRESPONDENCE ADDRESS:

17 (A) ADDRESSEE: Rockey, Milnamow & Katz, Ltd.  
18 (B) STREET: 180 N. Stetson, 2 Prudential Plaza, Suite  
19 4700  
20 (C) CITY: Chicago  
21 (D) STATE: Illinois  
22 (E) COUNTRY: U.S.A.  
23 (F) ZIP: 60601

25 (v) COMPUTER READABLE FORM:

26 (A) MEDIUM TYPE: Floppy disk  
27 (B) COMPUTER: IBM PC compatible  
28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
29 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

31 (vi) CURRENT APPLICATION DATA:

C--- 32 (A) APPLICATION NUMBER: US/10/815,320  
C--- 33 (B) FILING DATE: 01-Apr-2004  
W--- 39 (C) CLASSIFICATION: 424

36 (vii) PRIOR APPLICATION DATA:

37 (A) APPLICATION NUMBER: US/08/836,500  
38 (B) FILING DATE: 11-Aug-1997

41 (viii) ATTORNEY/AGENT INFORMATION:

42 (A) NAME: Katz, Martin L.  
43 (B) REGISTRATION NUMBER: 25,011  
44 (C) REFERENCE/DOCKET NUMBER: PIE1514P0180US

46 (ix) TELECOMMUNICATION INFORMATION:

47 (A) TELEPHONE: 312-616-5400  
48 (B) TELEFAX: 312-616-5460

51 (2) INFORMATION FOR SEQ ID NO: 1:

53 (i) SEQUENCE CHARACTERISTICS:

54 (A) LENGTH: 1007 base pairs  
55 (B) TYPE: nucleic acid  
56 (C) STRANDEDNESS: single  
57 (D) TOPOLOGY: linear

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/815,320

DATE: 11/04/2005  
TIME: 13:27:14

Input Set : N:\Crf3\RULE60\10815320.raw  
Output Set: N:\CRF4\11042005\J815320.raw

59 (ii) MOLECULE TYPE: cDNA  
62 (ix) FEATURE:  
63 (A) NAME/KEY: CDS  
64 (B) LOCATION: 1..1007  
67 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
69 GCT CCG AAA GAT AAC ACC TGG TAT GCA GGT GGT AAA CTG GGT TGG TCC 48  
70 Ala Pro Lys Asp Asn Thr Trp Tyr Ala Gly Gly Lys Leu Gly Trp Ser  
71 1 5 10 15  
73 CAG TAT CAC GAC ACC GGT TTC TAC GGT AAC GGT TTC CAG AAC AAC AAC 96  
74 Gln Tyr His Asp Thr Gly Phe Tyr Gly Asn Gly Phe Gln Asn Asn Asn  
75 20 25 30  
77 GGT CCG ACC CGT AAC GAT CAG CTT GGT GCT GGT GCG TTC GGT GGT TAC 144  
78 Gly Pro Thr Arg Asn Asp Gln Leu Gly Ala Gly Ala Phe Gly Gly Tyr  
79 35 40 45  
81 CAG GTT AAC CCG TAC CTC GGT TTC GAA ATG GGT TAT GAC TGG CTG GGC 192  
82 Gln Val Asn Pro Tyr Leu Gly Phe Glu Met Gly Tyr Asp Trp Leu Gly  
83 50 55 60  
85 CGT ATG GCA TAT AAA GGC AGC GTT GAC AAC GGT GCT TTC AAA GCT CAG 240  
86 Arg Met Ala Tyr Lys Gly Ser Val Asp Asn Gly Ala Phe Lys Ala Gln  
87 65 70 75 80  
89 GGC GTT CAG CTG ACC GCT AAA CTG GGT TAC CCG ATC ACT GAC GAT CTG 288  
90 Gly Val Gln Leu Thr Ala Lys Leu Gly Tyr Pro Ile Thr Asp Asp Leu  
91 85 90 95  
93 GAC ATC TAC ACC CGT CTG GGC GGC ATG GTT TGG CGC GCT GAC TCC AAA 336  
94 Asp Ile Tyr Thr Arg Leu Gly Met Val Trp Arg Ala Asp Ser Lys  
95 100 105 110  
97 GGC AAC TAC GCT TCT ACC GGC GTT TCC CGT AGC GAA CAC GAC ACT GGC 384  
98 Gly Asn Tyr Ala Ser Thr Gly Val Ser Arg Ser Glu His Asp Thr Gly  
99 115 120 125  
101 GTT TCC CCA GTA TTT GCT GGC GGC GTA GAG TGG GCT GTT ACT CGT GAC 432  
102 Val Ser Pro Val Phe Ala Gly Gly Val Glu Trp Ala Val Thr Arg Asp  
103 130 135 140  
105 ATC GCT ACC CGT CTG GAA TAC CAG TGG GTT AAC AAC ATC GGC GAC GCG 480  
106 Ile Ala Thr Arg Leu Glu Tyr Gln Trp Val Asn Asn Ile Gly Asp Ala  
107 145 150 155 160  
109 GGC ACT GTG GGT ACC CGT CCT GAT AAC GGC ATG CTG AGC CTG GGC GTT 528  
110 Gly Thr Val Gly Thr Arg Pro Asp Asn Gly Met Leu Ser Leu Gly Val  
111 165 170 175  
113 TCC TAC CGC TTC GGT CAG GAA GAT GCT GCA CCG GTT GTT GCT CCG GCT 576  
114 Ser Tyr Arg Phe Gly Gln Glu Asp Ala Ala Pro Val Val Ala Pro Ala  
115 180 185 190  
117 CCG GCT CCG GCT CCG GAA GTG GCT ACC AAG CAC TTC ACC CTG AAG TCT 624  
118 Pro Ala Pro Ala Pro Glu Val Ala Thr Lys His Phe Thr Leu Lys Ser  
119 195 200 205  
121 GAC GTT CTG TTC AAC TTC AAC AAA GCT ACC CTG AAA CCG GAA GGT CAG 672  
122 Asp Val Leu Phe Asn Phe Asn Lys Ala Thr Leu Lys Pro Glu Gly Gln  
123 210 215 220  
125 CAG GCT CTG GAT CAG CTG TAC ACT CAG CTG AGC AAC ATG GAT CCG AAA 720  
126 Gln Ala Leu Asp Gln Leu Tyr Thr Gln Leu Ser Asn Met Asp Pro Lys

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/815,320

DATE: 11/04/2005

TIME: 13:27:14

Input Set : N:\Crf3\RULE60\10815320.raw  
 Output Set: N:\CRF4\11042005\J815320.raw

127	225	230	235	240	
129	GAC GGT TCC GCT GTT GTT CTG GGC TAC ACC GAC CGC ATC GGT TCC GAA				768
130	Asp Gly Ser Ala Val Val Leu Gly Tyr Thr Asp Arg Ile Gly Ser Glu				
131	245	250	255		
133	GCT TAC AAC CAG CAG CTG TCT GAG AAA CGT GCT CAG TCC GTT GTC GAC				816
134	Ala Tyr Asn Gln Gln Leu Ser Glu Lys Arg Ala Gln Ser Val Val Asp				
135	260	265	270		
137	TAC CTG GTT GCT AAA GGC ATC CCG GCT GGC AAA ATC TCC GCT CGC GGC				864
138	Tyr Leu Val Ala Lys Gly Ile Pro Ala Gly Lys Ile Ser Ala Arg Gly				
139	275	280	285		
141	ATG GGT GAA TCC AAC CCG GTT ACT GGC AAC ACC TGT GAC AAC GTG AAA				912
142	Met Gly Glu Ser Asn Pro Val Thr Gly Asn Thr Cys Asp Asn Val Lys				
143	290	295	300		
145	GCT CGC GCT GCC CTG ATC GAT TGC CTG GCT CCG GAT CGT CGT GTA GAG				960
146	Ala Arg Ala Ala Leu Ile Asp Cys Leu Ala Pro Asp Arg Arg Val Glu				
147	305	310	315	320	
149	ATC GAA GTT AAA GGC TAC AAA GAA GTT GTA ACT CAG CCG GCG GGT TA				1007
150	Ile Glu Val Lys Gly Tyr Lys Glu Val Val Thr Gln Pro Ala Gly				
151	325	330	335		

154 (2) INFORMATION FOR SEQ ID NO: 2:

156 (i) SEQUENCE CHARACTERISTICS:

157 (A) LENGTH: 335 amino acids

158 (B) TYPE: amino acid

159 (D) TOPOLOGY: linear

161 (ii) MOLECULE TYPE: protein

163 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

165 Ala Pro Lys Asp Asn Thr Trp Tyr Ala Gly Gly Lys Leu Gly Trp Ser

166 1 5 10 15

168 Gln Tyr His Asp Thr Gly Phe Tyr Gly Asn Gly Phe Gln Asn Asn Asn

169 20 25 30

171 Gly Pro Thr Arg Asn Asp Gln Leu Gly Ala Gly Ala Phe Gly Gly Tyr

172 35 40 45

174 Gln Val Asn Pro Tyr Leu Gly Phe Glu Met Gly Tyr Asp Trp Leu Gly

175 50 55 60

177 Arg Met Ala Tyr Lys Gly Ser Val Asp Asn Gly Ala Phe Lys Ala Gln

178 65 70 75 80

180 Gly Val Gln Leu Thr Ala Lys Leu Gly Tyr Pro Ile Thr Asp Asp Leu

181 85 90 95

183 Asp Ile Tyr Thr Arg Leu Gly Gly Met Val Trp Arg Ala Asp Ser Lys

184 100 105 110

186 Gly Asn Tyr Ala Ser Thr Gly Val Ser Arg Ser Glu His Asp Thr Gly

187 115 120 125

189 Val Ser Pro Val Phe Ala Gly Gly Val Glu Trp Ala Val Thr Arg Asp

190 130 135 140

192 Ile Ala Thr Arg Leu Glu Tyr Gln Trp Val Asn Asn Ile Gly Asp Ala

193 145 150 155 160

195 Gly Thr Val Gly Thr Arg Pro Asp Asn Gly Met Leu Ser Leu Gly Val

196 165 170 175

198 Ser Tyr Arg Phe Gly Gln Glu Asp Ala Ala Pro Val Val Ala Pro Ala

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/10/815,320

DATE: 11/04/2005  
 TIME: 13:27:14

Input Set : N:\Crf3\RULE60\10815320.raw  
 Output Set: N:\CRF4\11042005\J815320.raw

199	180	185	190	
201	Pro Ala Pro Ala Pro Glu Val Ala Thr Lys His Phe Thr Leu Lys Ser			
202	195	200	205	
204	Asp Val Leu Phe Asn Phe Asn Lys Ala Thr Leu Lys Pro Glu Gly Gln			
205	210	215	220	
207	Gln Ala Leu Asp Gln Leu Tyr Thr Gln Leu Ser Asn Met Asp Pro Lys			
208	225	230	235	240
210	Asp Gly Ser Ala Val Val Leu Gly Tyr Thr Asp Arg Ile Gly Ser Glu			
211	245	250	255	
213	Ala Tyr Asn Gln Gln Leu Ser Glu Lys Arg Ala Gln Ser Val Val Asp			
214	260	265	270	
216	Tyr Leu Val Ala Lys Gly Ile Pro Ala Gly Lys Ile Ser Ala Arg Gly			
217	275	280	285	
219	Met Gly Glu Ser Asn Pro Val Thr Gly Asn Thr Cys Asp Asn Val Lys			
220	290	295	300	
222	Ala Arg Ala Ala Leu Ile Asp Cys Leu Ala Pro Asp Arg Arg Val Glu			
223	305	310	315	320
225	Ile Glu Val Lys Gly Tyr Lys Glu Val Val Thr Gln Pro Ala Gly			
226	325	330	335	

228 (2) INFORMATION FOR SEQ ID NO: 3:

230 (i) SEQUENCE CHARACTERISTICS:  
 231 (A) LENGTH: 537 base pairs  
 232 (B) TYPE: nucleic acid  
 233 (C) STRANDEDNESS: single  
 234 (D) TOPOLOGY: linear

236 (ii) MOLECULE TYPE: cDNA

239 (ix) FEATURE:  
 240 (A) NAME/KEY: CDS  
 241 (B) LOCATION: 1..537

244 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

246	GCT CCG AAA GAT AAC ACC TGG TAT GCA GGT GGT AAA CTG GGT TGG TCC	48
247	Ala Pro Lys Asp Asn Thr Trp Tyr Ala Gly Gly Lys Leu Gly Trp Ser	
248	1 5 10 15	
250	CAG TAT CAC GAC ACC GGT TTC TAC GGT AAC GGT TTC CAG AAC AAC AAC	96
251	Gln Tyr His Asp Thr Gly Phe Tyr Gly Asn Gly Phe Gln Asn Asn Asn	
252	20 25 30	
254	GGT CCG ACC CGT AAC GAT CAG CTT GGT GCT GGT GCG TTC GGT GGT TAC	144
255	Gly Pro Thr Arg Asn Asp Gln Leu Gly Ala Gly Ala Phe Gly Gly Tyr	
256	35 40 45	
258	CAG GTT AAC CCG TAC CTC GGT TTC GAA ATG GGT TAT GAC TGG CTG GGC	192
259	Gln Val Asn Pro Tyr Leu Gly Phe Glu Met Gly Tyr Asp Trp Leu Gly	
260	50 55 60	
262	CGT ATG GCA TAT AAA GGC AGC GTT GAC AAC GGT GCT TTC AAA GCT CAG	240
263	Arg Met Ala Tyr Lys Gly Ser Val Asp Asn Gly Ala Phe Lys Ala Gln	
264	65 70 75 80	
266	GGC GTT CAG CTG ACC GCT AAA CTG GGT TAC CCG ATC ACT GAC GAT CTG	288
267	Gly Val Gln Leu Thr Ala Lys Leu Gly Tyr Pro Ile Thr Asp Asp Leu	
268	85 90 95	
270	GAC ATC TAC ACC CGT CTG GGC GGC ATG GTT TGG CGC GCT GAC TCC AAA	336

**RAW SEQUENCE LISTING** DATE: 11/04/2005  
**PATENT APPLICATION:** US/10/815,320 **TIME:** 13:27:14

Input Set : N:\Crf3\RULE60\10815320.raw  
 Output Set: N:\CRF4\11042005\J815320.raw

271 Asp Ile Tyr Thr Arg Leu Gly Gly Met Val Trp Arg Ala Asp Ser Lys  
 272 100 105 110  
 274 GGC AAC TAC GCT TCT ACC GGC GTT TCC CGT AGC GAA CAC GAC ACT GGC 384  
 275 Gly Asn Tyr Ala Ser Thr Gly Val Ser Arg Ser Glu His Asp Thr Gly  
 276 115 120 125  
 278 GTT TCC CCA GTA TTT GCT GGC GGC GTA GAG TGG GCT GTT ACT CGT GAC 432  
 279 Val Ser Pro Val Phe Ala Gly Gly Val Glu Trp Ala Val Thr Arg Asp  
 280 130 135 140  
 282 ATC GCT ACC CGT CTG GAA TAC CAG TGG GTT AAC AAC ATC GGC GAC GCG 480  
 283 Ile Ala Thr Arg Leu Glu Tyr Gln Trp Val Asn Asn Ile Gly Asp Ala  
 284 145 150 155 160  
 286 GGC ACT GTG GGT ACC CGT CCT GAT AAC GGC ATG CTG AGC CTG GGC GTT 528  
 287 Gly Thr Val Gly Thr Arg Pro Asp Asn Gly Met Leu Ser Leu Gly Val  
 288 165 170 175  
 290 TCC TAC CGC 537  
 291 Ser Tyr Arg  
 295 (2) INFORMATION FOR SEQ ID NO: 4:  
 297 (i) SEQUENCE CHARACTERISTICS:  
 298 (A) LENGTH: 179 amino acids  
 299 (B) TYPE: amino acid  
 300 (D) TOPOLOGY: linear  
 302 (ii) MOLECULE TYPE: protein  
 304 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
 306 Ala Pro Lys Asp Asn Thr Trp Tyr Ala Gly Gly Lys Leu Gly Trp Ser  
 307 1 5 10 15  
 309 Gln Tyr His Asp Thr Gly Phe Tyr Gly Asn Gly Phe Gln Asn Asn Asn  
 310 20 25 30  
 312 Gly Pro Thr Arg Asn Asp Gln Leu Gly Ala Gly Ala Phe Gly Gly Tyr  
 313 35 40 45  
 315 Gln Val Asn Pro Tyr Leu Gly Phe Glu Met Gly Tyr Asp Trp Leu Gly  
 316 50 55 60  
 318 Arg Met Ala Tyr Lys Gly Ser Val Asp Asn Gly Ala Phe Lys Ala Gln  
 319 65 70 75 80  
 321 Gly Val Gln Leu Thr Ala Lys Leu Gly Tyr Pro Ile Thr Asp Asp Leu  
 322 85 90 95  
 324 Asp Ile Tyr Thr Arg Leu Gly Gly Met Val Trp Arg Ala Asp Ser Lys  
 325 100 105 110  
 327 Gly Asn Tyr Ala Ser Thr Gly Val Ser Arg Ser Glu His Asp Thr Gly  
 328 115 120 125  
 330 Val Ser Pro Val Phe Ala Gly Gly Val Glu Trp Ala Val Thr Arg Asp  
 331 130 135 140  
 333 Ile Ala Thr Arg Leu Glu Tyr Gln Trp Val Asn Asn Ile Gly Asp Ala  
 334 145 150 155 160  
 336 Gly Thr Val Gly Thr Arg Pro Asp Asn Gly Met Leu Ser Leu Gly Val  
 337 165 170 175  
 339 Ser Tyr Arg  
 342 (2) INFORMATION FOR SEQ ID NO: 5:  
 344 (i) SEQUENCE CHARACTERISTICS:  
 345 (A) LENGTH: 216 base pairs

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/815,320

DATE: 11/04/2005

TIME: 13:27:15

Input Set : N:\Crf3\RULE60\10815320.raw  
Output Set: N:\CRF4\11042005\J815320.raw

L:32 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:33 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:39 M:238 W: Alpha Fields not Ordered [(C) CLASSIFICATION:] of (1) (vi)